

# Shyam Sivasubramanian

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## EDUCATION

### Purdue University

*Bachelor of Science in Computer Science and Data Science*

#### Relevant Coursework:

- Discrete Math and Data Structures and Algorithms
- Data Science and Statistics using R and Python
- Linear Algebra and Calculus

West Lafayette, IN

Aug. 2023 – May 2027

## TECHNICAL SKILLS

**Programming Languages:** Java, R, Python, C, C++, Assembly, SQL, GLSL, HTML, CSS, JavaScript

**Tools & Libraries:** Mediapipe, Scikit-Learn, OpenCV, Pandas, Numpy, Virtual Reality, Plotnine, Statsmodels, Stable Baselines 3, PyTorch, Git, CLI, Linux, ROS, OpenGL

## EXPERIENCE

### Researcher

Aug. 2024 – Present

*Purdue CoMMA Lab*

- Created and deployed scripts on robot manipulators to detect and avoid collisions in real time using computer vision.
- Worked with Virtual Reality (VR) technology to control robot manipulators with integrated collision detection.
- Improving **Foam**: an automated mesh simplification tool for faster computation on robot manipulators.

### Data Science Intern

May 2025 – Aug. 2025

*Karyon.bio*

- Built classification models using Pandas and Statsmodels to detect fatty liver disease, diabetes, cervical and breast cancer from medical scans.
- Visualized performance and patient likelihood outcomes with Plotnine.

### Web Developer

Feb. 2025 – Jun. 2025

*The Purdue Rivet*

- Developed a website using HTML, CSS, and JavaScript for Purdue's student-run publication.

### Staff Photographer, Graphics Artist

Aug. 2023 – Present

*The Purdue Exponent*

- Photographed and designed artwork to add context to Purdue's student newspaper stories.

### Research Assistant

Jun. 2022 – Aug. 2022

*The Robotics Institute, Carnegie Mellon University*

- Developed test scripts for reinforcement learning research in robotics.
- Conducted robot simulations to validate and improve algorithm performance.

### Intern

Jun. 2022 – Aug. 2022

*Biohaven Pharmaceuticals*

- Analyzed clinical trial data for neurological drugs using R, ensuring accurate reporting.
- Assisted with technical issues in data collection and data corruption.

## PROJECTS

### Minesweeper Auto Solver | *HTML, CSS, JavaScript*

Jul. 2025

- Generated Minesweeper puzzles and implemented an algorithmic solver with hierarchical reasoning.
- Built a web-based interface using HTML, CSS, and JavaScript.

### DeepRow | *Python, Scikit-Learn, Numpy, OpenCV, MediaPipe*

May 2023

- Quantified rowing form using computer vision and pose estimation data from professional athletes.
- Trained and classified form with a Random Forest Classifier.

### Shader Study | *GLSL, OpenGL*

Jun. 2024

- Created generative art pieces based on multivariable calculus and animation.
- Learned advanced concepts in graphics programming and shader design.